

FIRST OBSERVATIONS ON *PHRYNOCEPHALUS MACULATUS*
LONGICAUDATUS HAAS, 1957 (SQUAMATA: SAURIA: AGAMIDAE)
IN IRAQ

Ali N. Al-Barazengy
Iraqi Ministry of Environment/Center of Sustainable Management for
Natural Ecosystem-biodiversity unit
Email: ali_bio_84@yahoo.com
Phone: +9647703211822

ABSTRACT

The present paper confirmed the presence of *Phrynocephalus maculatus longicaudatus* Haas, 1957 in Iraq and recorded the first observations of this taxon in Al-Muthanna province southwestern of Iraq. The existence of the species is yet uncertain in Iraq. The habitat and morphological characteristics of this species were reviewed.

KEY WORDS: Reptilia, Squamata, Sauria, Agamidae, *Phrynocephalus maculate*, observation, southern Iraq, taxonomy

INTRODUCTION

Phrynocephalus maculatus Anderson, 1872 is widely distributed from South West Pakistan, South Afghanistan, through Iran to Eastern Arabia and South East Jordan Sindaco and Jeremcenko (2008) and Schultz *et al.* (1992). *Phrynocephalus maculatus maculatus* Anderson, 1872 distributed the Central Plateau of Iran, at elevations from 500-3000 meters east through southern Afghanistan and Baluchistan as far as Nushki, Pakistan, and *Phrynocephalus maculatus longicaudatus* Haas, 1957 is found along the gulf coast of Saudi Arabia Leviton *et al.* (1992) and Anderson (1999). The occurrence of *P. m. maculatus* in Iraq was reported by Khalaf (1959) without further information. For these reasons there were some doubts on its occurrence because there are neither museum specimens nor published records on this species in Iraq Leviton *et al.* (1992). Afrasiab and Ali (1989) did not record *Phrynocephalus* in their list for Romaila reptiles, South of Iraq. Also it was not included in the family Agamidae in the check list of reptiles and amphibians of Iraq that giving by Amr (2009) and. Furthermore, there are seven species of *phrynocephalus* has been recorded in Iran including *P. maculatus* Rastegar-Pouyani *et al.* (2008), and two species of *phrynocephalus* has been recorded in Jordan, *P. maculatus* and *P. arabicus* Abu Baker *et al.* (2005).

MATERIALS AND METHODS

Sawa Lake is an enclosed lake located Northern of Al-Muthanna province and Al-Wuhashih hill a desert area located to the East of Al-Muthanna province (30 Km south of AL-Khader city). These two sites are regularly surveyed to study the wild birds in the province. Most habitats in those sites are semi desert and sandy desert. Adult of *P. maculatus* was photographed for the first time in area called Um Al-Rouge (fig.1) (a sandy area on the road leading to Al-Wuhashih hill (N: 31.0384°, E: 45.57053°, altitude approximately (2 m)

First Record of *Bostrichuscapucinus*

in 14 May 2013). The other *P. maculatus* was photographed once more near Sawa lake (fig.2) (N: 31.32123°, E: 45.03544°, altitude approximately (10 m) in 28 Aug 2013).

Two Canon EOS camera bodies is used (Canon EOS 450D and Canon EOS 550D) equipped with lenses Canon EF 100-400 mm (f 4-5.6), Canon EF 400 mm (f 5.6) and Canon EFS 18-55mm (f 3.5-5.6) to take close-up photos to confirm field identifications for the species, and to take a landscape photographs the area which the agama was presented there. We also used a Garmin eTrex GPS device to record locations (longitude, latitude, and elevation).

Phrynocephalus maculatus longicaudatus Haas, 1957 diagnosed depending on Haas (1957), Leviton *et al.* (1992) and Anderson (1999)

RESULTS AND DISCUSSION

In summer 2013 the Iraqi Ministry of Environment carried out a field survey to study the wild birds in the important biodiversity areas in AL-Muthanna province, which is one of the largest provinces South West part of Iraq. Most of the province is located in Ecoregion: Arabian Desert and East Sahero-Arabian xeric shrublands (PA1303) according to World Wildlife Fund (WWF), and the encyclopedia of earth. The biodiversity of this region is the least known in Iraq (Iraq fourth National Report to the Convention on Biological Diversity 2010). Many sites North, South, East and West the province were surveyed, during which two specimens of *P. maculatus* were collected, for the first time in late spring to the South of Al-Khader city (40Km Southeast of Al-Samawah city) in the part of sandstone North and Northeast of the province; the other one seen in mid-summer sandy area Eastern of Sawa Lake (28Km Southeast of Al-Samawah city).



Fig.1: Habitat of *P. maculatus* at Um Al-Rouge area-Al-Muthanna province / South West Iraq. (Photographs by Ali N. Al-Barazengy/ May 2013)



Ali N. Al-Barazengy

Fig.2: Habitat of *P.maculatus*, Eastern Sawa Lake –Al-Muthanna province / South West Iraq. (Photographs by Ali N. Al-Barazengy/ August 2013).

OBSERVATIONS

In our surveys we found one *P. maculatus* in each site. The first was climber on plant *Haloxylon salicornicum*, the other was procumbent on the sand. The phenotypic characteristics of the tow specimens coincide with diagnosis of *P. m. longicaudatus* Haas, 1957, (figs. 3, 4). The head is short and broad, roughly looks like a heart on top view. Forehead convex, with slightly enlarged scales, slot big mouth, no cutaneous folds at angle of mouth, no fringe of scales on posterior border of thigh and side of tail, side of head and neck without projecting fringe-like scales, dorsal scales homogeneous, no enlarged scales along flanks, scales on vertebral region considerably larger than those on flanks, nostrils are separated by one to three scales. Differs from *P. m. maculatus* in having posterior supraorbital scales strikingly flattened and enlarged, longer than wide, and larger than mid-dorsal scales; a few dorsal scales are keeled or with an indication of mucronation; nostrils are directed forward instead of upward; tail is longer than twice the distance from the gular fold to the vent; dark coloration of the distal part of the tail is pronounced ventrally.

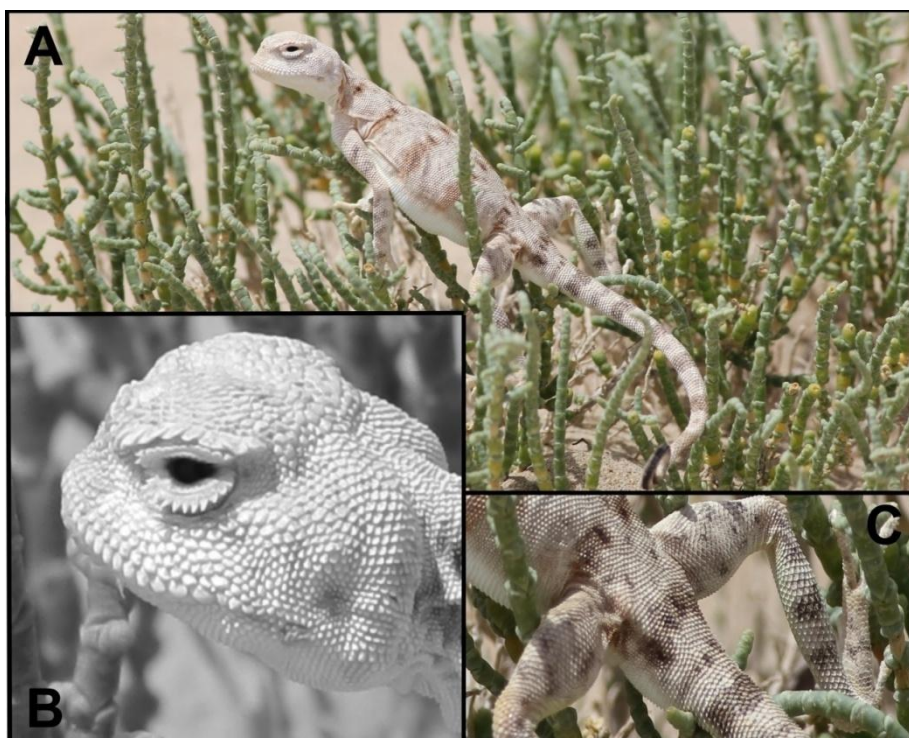


Fig.3: (A) Female *Phrynocephalus maculatus longicaudatus* Haas, 1957. (B) Side view of the head showing 5 rows of scales between eye and lip. And have enlarged posterior supraorbital scales larger than mid-dorsal scales typical for ssp. *longicaudatus* Haas, 1957. (C) Rearward view showing no fringe of scales on posterior border of thigh and

First Record of *Bostrichuscapucinus*

side of tail. (Photographs by Ali N. Al-Barazengy Um Al-Rouge area Al-Muthanna province in may 2013).

Coloration

Individual that located in Um Al-Rouge area is colored by silver-grey on dorsum, barred transversally with five wide light brown bars ended on vertebral region of the back, each bar ended with dark brown spot on dorsum. The belly, under head and under tail was white. Toes barred with dark grey strips. Tail barred with seven dark strips and thin zigzag strips in-between, the ventral end of the tail was black. The other Individual that located in Eastern Sawa Lake is colored by pale light grey to sandy color on dorsum and toes spotted with tight brown, the head paler than dorsum. The belly, under head was white, under tail has orange coloration from the vent across the anterior half of its length. Tail barred and spotted with dark grey and the tip of tail is black.

Habitat

Um Al-Rouge area is located in South East AL-Samawa city, the site is small sandy dunes in wide shrubs desert, the growing plants in the site are mostly of one species *Haloxylon salicornicum* (fig.1). The other site is Sawa lake is a small enclosed lake with neither input nor output water sources surrounded with shrubs desert. Sahara in the east and west side of the lake is sandy shrub desert most plants in eastern side are *Salicornia europaea*, *Bienertia cycloptera*, *Suaeda vermiculata*, *Cornulaca leucantha* sp., *neurada procumbens* (fig. 2).

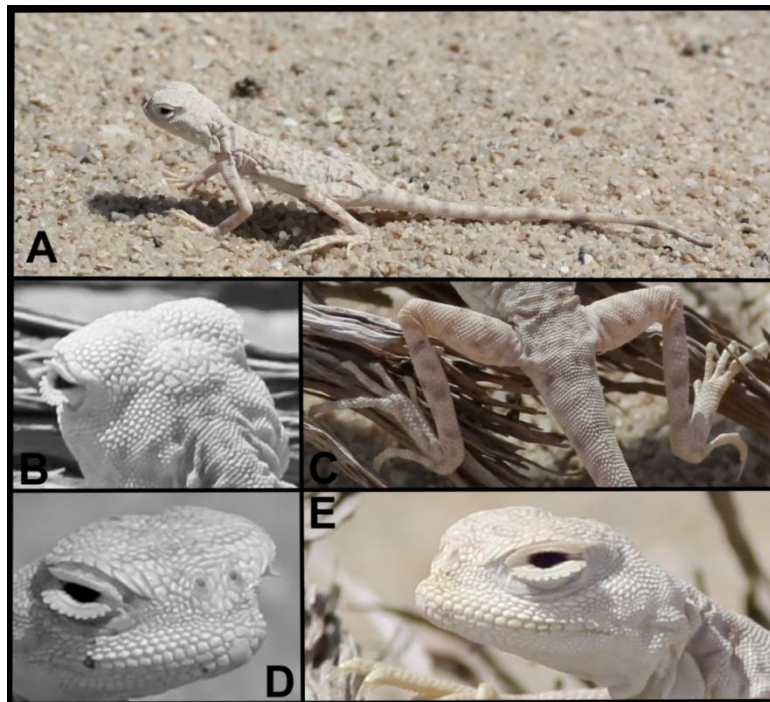


Fig.4: (A) Adult *Phrynocephalus maculatus longicaudatus* Haas, 1957. (B) Dorsal view of the head showing enlarged posterior supraorbital scales, typical for ssp. *longicaudatus* Haas, 1957 (C) Rearward view showing no fringe of scales on posterior border of thigh and side of tail. (D) Frontal view showing the nostrils separated by three scales, directed forward instead of upward. (E) Side view of the head showing 4 rows of scales between eye and lip. (Photographs by Ali N. Al-Barazengy, Eastern Sawa Lake -Muthanna province, Aug 2013).

Ali N. Al-Barazengy

Key to the species of the genus *phrynocephalus* in the Middle East

- Fringes of pointed scales on toes strong, scales surrounding nostrils typically in contact on midline; often 3 or 4 rows of scales between eye and lip; usually brownish above with some yellow or orange in pattern *Phrynocephalus arabicus*.
- Fringes of pointed scales on toes moderate; scales surrounding nostrils typically separated from each other on midline; often 5 or 6 rows of scales between eye and lip; dorsal with five dark crossbars..... *Phrynocephalus maculatus longicaudatus*.

ACKNOWLEDGEMENTS

I would like to extend my thanks and gratitude to all of:

Iraqi Ministry of Environment (IMoE), for support the field surveys in south Iraq, Saman R. Afrasiab herpetologist in Iraq Natural history research center and museum/ Baghdad university for his comments on *Phrynocephalus maculatus* in Iraq. Omar F. Al-Sheikhly a Zoologist in College of Science/ University of Baghdad, for his comments on *Phrynocephalus maculatus* in Iraq. Ali Haloob a Botanist in Center of Sustainable Management for Natural Ecosystem (IMoE), for his help graciously in the classification of plants in the region. Farah T. Abd Alhamid a biology in Center of Sustainable Management for Natural Ecosystem (IMoE), Mohamed Abbas Natural Systems Division / Al-Muthanna Environment Directorate.

LITERATURE CITED

- Abu-Baker M. .P. Siroky. ,Z. Amr., & D. Modry 2005. Discovery of a population of *Phrynocephalus maculatus* Anderson in Hashemit Kingdom of Jordan. Herpetozoa 18(3/4): 107-113.
- Afrasiab, S.R. & Ali, H. A., 1989. Report on collection of reptiles from Rumaila desert, South of Iraq. Bull. Iraq nat.hist. Mus. 8:65-73.
- Amr, Z. 2009. Nature Iraq Species Checklist - Reptiles and Amphibians of Iraq. Sulaimani, Iraq: Nature Iraq. Publication No. NI-0209-003: 1-9.
- Anderson, S. C., 1999. The lizards of Iran. Society for the Study of Amphibians and Reptiles. Oxford, Ohio. 442 pp.
- Haas, G. 1957. Some amphibians and reptiles from Arabia. Proceedings of the California academy of sciences fourth series 29 (3): 47-86.
- Khalaf, K. T. 1959. Reptiles of Iraq, with some notes on the amphibians. Ar-Rabitta Press, Baghdad. Vii+96pp. Iraq.
- Leviton, A. E., Anderson, S.C., Adler K. & Minton S.A. 1992. Hand book to the Middle East amphibians and reptiles. Ithaca, New York, SSAR: 252 pp.
- Ministry of Environment, Republic of Iraq 2010. Iraq fourth National Report to the Convention on Biological Diversity. Retrieved 10 July 2014 from: <http://www.cbd.int/doc/world/iq/iq-nr-04-en.pdf>

First Record of *Bostrichuscapucinus*

Rastegar-Pouyani, N., H.G. Kami, M. Rajabzadeh, S. Shafiei, & Anderson, S. C. 2008. Annotated checklist of Amphibians and Reptiles of Iran-Iranian journal of Animal biosystematics (IJAB) 1: 43-66.

Schultz, S., Siegenthaler, F., Radspieler, C., and Wilms, TH.M. 2013. A new locality record of *Phrynocephalus maculatus* Anderson, 1872, from Jordan [Short Note] Herpetozoa 25

Sindaco, R. And Jeremcenko, V. K. 2008. The Reptiles of the Western Palearctic. 1. Annotated Checklist and Distributional Atlas of the Turtles, Crocodiles, Amphisbaenians and Lizards of Europe, North Africa, Middle East and Central Asia. Edizioni Belvedere, Latina: 579 pp.

The encyclopedia of earth. Arabian Desert and East Sahero-Arabian xeric shrublands, Retrieved 25 January 2015 from: <http://www.eoearth.org/view/article/150161/>

WWF. Ecoregions. World Wildlife Fund, Retrieved 11 July 2014 from <http://www.worldwildlife.org/science/ecoregions/item1847.html>. Retrieved 8 February 2010.

Ali N. Al-Barazengy

Bull. Iraq Nat. Hist. Mus.
(2014) 13 (2): 119-125

المشاهدات الأولى للحرذون *Phrynocephalus maculatus*
longicaudatus Haas, 1957 في العراق

علي البرزنجي
وزارة البيئة
الخلاصة

يوضح هذا البحث حالة وجود النوع *Phrynocephalus maculatus*
longicaudatus Haas, 1957 في العراق وتسجيل المشاهدات الأولى له في
محافظة المثنى في الجزء الجنوبي الغربي من العراق، ويعتبر هذا النوع من
الزواحف التابعة لفصيلة الحرذون وهو من الأنواع غير مؤكدة الوجود في
العراق ولم يصف أي أحد من قبل مكان تواجده في العراق حتى الآن، كذلك
يستعرض الموئل الذي وجد فيه والصفات المظهرية للنوع